Clinical Practice Guideline: **Obesity/Overweight**

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Product: **Specialty**

GUIDELINES

Among portal of entry practitioners, screening for obesity and overweight using Body Mass Index (BMI) is considered best practice. Providing a direct intervention (e.g., lifestyle and/or dietary changes) for adult patients identified as having obesity or overweight, will depend upon the practitioner's education, training, experience, and scope of practice. In the absence of such a direct intervention, providing a referral intervention (e.g., to the patient's medical physician) is considered necessary. Measurements such as BMI may be outside the education, training, experience, or scope of some practitioner types. In the context of best practices, for these practitioners, a level of awareness of risk factors and/or signs/symptoms that overweight/obesity is present and a subsequent referral for appropriate evaluation is necessary and within the purview of all.

INTRODUCTION

The impact of obesity and overweight on health is significant. Obesity is associated with health problems such as increased risk for coronary heart disease, stroke, type 2 diabetes, various types of cancer (e.g., liver, kidney, breast, endometrial, prostate, and colon), gallstones, and disability. Obesity is also associated with an increased risk for death, particularly among adults younger than 65 years. The leading causes of death among adults with obesity include ischemic heart disease, type 2 diabetes, respiratory diseases, and cancer.

As BMI increases above 25, the risk of developing chronic conditions such as coronary heart disease (CHD), hypertension, stroke, type 2 diabetes, and cancer of the colon, kidney, gallbladder, breast, and endometrium also rises. The probability of developing other conditions such as gall bladder disease, sleep apnea, and osteoarthritis of weight-bearing joints is higher in individuals with obesity and overweight. Obesity can adversely affect overall quality of life, as it may impair mobility, leading to limited functional and social activities, along with social stigmatization. Among individuals $\geq$ 65 years however, a BMI between 25 and 27 may be associated with reduced mortality. For example, a slightly higher BMI in a person 65 years or older may help protect against osteoporosis (Winter et al., 2014). Further, obesity and overweight among children is being shown to produce similar manifestations as adults on the child's physical and psychological health including quality of life (Cuda and Censani, 2018).

ASSESSING OBESITY

As appropriate to a practitioner's education, training, experience, and scope of practice, there are various techniques in use to measure obesity, including body mass index (BMI), bioelectrical impedance, dual-energy x-ray absorptiometry (DEXA), and total body water immersion. BMI represents a calculation of body weight adjusted for height (weight in kilograms divided by height in meters squared) (USPSTF, 2018). Risk for adverse health effects increases linearly with BMI. However, increased musculature (e.g., with some athletes) increases BMI which negatively impacts the accuracy of this measure.

The U.S. Preventive Services Task Force (USPSTF) has designated measurement of BMI by the clinician as the appropriate screening method for obesity/overweight. There are numerous online BMI calculators including the National Institutes of Health's at http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm.

- BMI of 25-29.9 kg/m^2 indicates overweight while
- BMI $\geq$ 30 kg/m^2 indicates obesity
    - Obesity is further differentiated into 3 classes:
        - I = BMI 30-34.9 kg/m^2
        - II =BMI 35-39.9 kg/m^2
        - III =BMI $\geq$ 40 kg/m^2

Obesity in children is defined as a body mass index (BMI) at or above the 95th percentile of the CDC gender-specific BMI-for-age growth charts.

Another measure helpful in assessing health risks is central adiposity or waist circumference, which is associated with risk of cardiovascular disease, diabetes, and other conditions, independent of obesity. Central adiposity is measured by waist circumference (WC); men with a WC > 40 inches (102 cm) and women with a WC > 35 inches (88 cm) are at increased risk for cardiovascular disease. Because BMI does not assess body fat distribution, WC is a useful measure, as central adiposity is an indicator of health risk independent of body fat percentage or BMI. The following table summarizes the relationship of BMI and WC to health risks (Garvey et al., 2016). As with BMI, measuring central adiposity may be outside the scope for some practitioners. In such cases, one's clinical impression/awareness that overweight/obesity might be of issue is an appropriate reason for a referral intervention.

Relationship of BMI and WC to Health Risks

Description	BMI (kg/m^2)	Obesity class	Waist Circumference (WC) and Associated Health Risks	
			WC Men ≤ 40" or Women ≤ 35"	WC Men > 40" or Women > 35"
Underweight	<18.5			
Normal	18.5-24.9			
Overweight	25-29.9		Increased risk	High risk
Obese	30-34.9	I	High risk	Very high risk
	35-39.9	II	Very high risk	Very high risk
Extremely Obese	40+	III	Extremely high risk	Extremely high risk

Table 1. National Heart, Lung, and Blood Institute.
https://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmi_dis.htm

The Lancet Diabetes & Endocrinology Commission (Rubino et al., 2025) provides a new comprehensive overview of the definition and diagnostic criteria for clinical obesity which has been endorsed by over 76 health organizations worldwide. It emphasizes that current BMI-based measures of obesity can both underestimate and overestimate adiposity, providing inadequate information about individual health. The Commission recommends that BMI should be used only as a surrogate measure of health risk at a population level, for epidemiological studies, or for screening purposes, rather than as an individual measure of health. Excess adiposity should be confirmed by 1) either direct measurement of body fat or; 2) at least one anthropometric criteria (e.g., waist circumference, waist-to-hip ratio or waist-to-height ratio) in addition to BMI or; 3) at least two anthropometric criteria regardless of BMI. Validated methods and cutoff points appropriate to age, gender, and ethnicity should be used for any anthropometric criteria used. The commission proposes a two-tier classification system. The first tier is preclinical obesity, defined as individuals who have excessive body fat but no related medical conditions but generally an increased risk in developing clinical obesity. The second tier is clinical obesity which is defined as a chronic, systemic illness characterized by alterations in the function of tissues, organs, or the entire individual due to excess adiposity. This condition can lead to severe end-organ damage, causing life-altering and potentially life-threatening complications such as heart attack, stroke, and renal failure. People with clinical obesity should receive timely, evidence-based treatment aimed at improving or achieving remission of clinical manifestations and preventing progression to end-organ damage. Those with preclinical

obesity should undergo health counseling, monitoring, and appropriate intervention to reduce the risk of developing clinical obesity and other obesity-related diseases.

The Commission also highlights the importance of addressing weight-based bias and stigma, which are major obstacles in efforts to effectively prevent and treat obesity.

USPSTF SCREENING RECOMMENDATIONS

USPSTF Recommendation Levels:

Grade	Definition	Suggestions for Practice
A	The USPSTF *recommends* the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF *recommends* the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends *selectively* offering or providing this service based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on circumstances.
D	The USPSTF recommends *against* the service. There is moderate or high certainty of either no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I	The USPSTF concludes that the current evidence is *insufficient* to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

A comprehensive review of the USPSTF rating process can be found in the *Preventive Care Services(CPG 140 – S)* clinical practice guideline or at the USPSTF website (https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/methods-and-processes/grade-definitions).

USPSTF Recommendations:

Weight Loss to Prevent Obesity-Related Morbidity and Mortality in Adults: Behavioral Interventions (2018)
Grade B Recommendation: *The USPSTF recommends that clinicians offer or refer adults with a body mass index (BMI) of 30 or higher (calculated as weight in kilograms divided by height in meters squared) to intensive, multicomponent behavioral interventions.*

High Body Mass Index in Children and Adolescents: Interventions (2024)
Grade B Recommendation: *The USPSTF recommends that clinicians screen for obesity in children and adolescents 6 years and older and provide or refer them to comprehensive, intensive behavioral interventions.*

INTERVENTIONS

Counseling and Behavioral Interventions. "Counseling" refers to advice from the clinician to the patient to promote change. "Behavioral interventions" refers to strategies that assist people in acquiring skills, motivation, and support needed to change their health habits. The 5A's (Ask, Advise, Assess, Assist, and Arrange) is a framework frequently used in clinical practice to guide behavioral interventions (Alexander et al., 2011).
Applied to weight management for individuals with obese/overweight.:

- Ask the patient about weight, nutrient intake, and physical activities.
- Advise with clear and impactful recommendations (e.g., related to comorbidities and the personalized health consequences of not losing weight).
- Assess the patient's readiness to change their lifestyle (diet and exercise).
- Assist the patient by providing counseling and/or self-help materials (e.g., websites, organizations, contact information) to help them manage their weight.
- Arrange for follow up with the practitioner or another practitioner specializing in an area to help the patient (e.g., a qualified nutrition professional).

Some behavioral interventions to obesity treatment are based on Social Learning Theory (Bandura, 2004), with the assumption that eating, and exercise are learned behaviors and that by modifying them, body weight can be changed. Common behavioral strategies used in behavioral weight loss programs are detailed below.

- **Self-monitoring:** Recording behaviors associated with food consumption and physical activity.
- **Stimulus control:** Restricting environmental factors associated with inappropriate behaviors.
- **Contingency management:** Rewarding appropriate behaviors.
- **Changing behavior parameters:** Changing or altering behaviors.

- **Cognitive-behavior modification:** Changing thinking patterns related to target behavior.

The patient's main health concerns should be addressed as the primary focus. The practitioner may integrate the discussion of weight management issues that may be affecting the patient's physical or emotional health into the clinical dialogue.

Key Steps for Health Practitioners:

- Identify at-risk individuals and help them understand that modest weight loss (5–10 percent) can lead to clinically important reductions in disease risk factors.
- Encourage individuals to adopt healthy lifestyle behaviors: healthy food choices, regular physical activity, reduce sedentary activities such as watching television or computer games.
- Monitor and treat potential health effects of overweight or obesity.

The USPSTF recommends that health care practitioners counsel adults about physical activity selectively, based on risk factors, rather than incorporate counseling into the care of all patients within the population. These recommendations are based on the health benefits of physical activity, rather than on the effectiveness of practitioner counseling to promote changes in physical activity or long-term health outcomes. See the *Physical Activity (CPG 181-S)* clinical practice guidelines for more information.

The USPSTF (2018) found that behavior-based weight-loss interventions with or without weight loss medications resulted in more weight loss than usual care conditions. The degree of weight loss observed with the behavior-based weight loss interventions in the current review is slightly smaller but consistent in magnitude with the 2011 review on this topic. As in the previous review, authors noted that weight loss interventions resulted in a decreased risk of developing diabetes, particularly among those with prediabetes, although the prevalence of other intermediate health outcomes was less well reported. Limited evidence exists regarding health outcomes associated with weight loss interventions. Weight loss medications, but not behavior-based interventions, were associated with higher rates of harms compared with control arms. Heterogeneity within each individual intervention arm confounded with differences in the populations, settings, and trial quality, making it difficult to disentangle which variables may be driving larger effects. Long-term weight and health outcomes data, as well as data on important subgroups (e.g., those who are older, nonwhite, or overweight) were lacking and should be a high priority for future study. The USPSTF (2017) recommendations on obesity in children and adolescents stated that evidence suggests that lifestyle-based weight loss interventions with 26 or more contact hours are likely to help reduce excess weight in children and adolescents; average effect sizes were relatively small and highly variable.

Pharmacotherapy. If utilized, weight management medications are typically meant to be used along with nutrition, exercise, and behavior management. More recent formulations and unique drug combinations have come on to the market, some are approved by the FDA for weight loss and others are being prescribed for off label use in weight loss. In randomized controlled trials (RCTs), older classes of drugs and these newer formulations have resulted in from 3 to 20% weight reduction over placebo, including in adolescents. Adverse effects may occur. Patients must consult with their primary treating practitioner for assistance with the appropriate use of medications as part of their weight management program. This would require a health care practitioner for whom prescriptions are within their scope of practice.

Surgery.

According to National Institutes of Health (NIH), patients with a BMI >40 kg/m^2 or with a BMI ≥ 35 kg/m^2 who have not responded to other treatment and who have severe health complications may be considered as candidates for bariatric surgery. The surgical approach is either restrictive or malabsorptive; currently restrictive techniques predominate. In patients with *extreme* obesity, bariatric surgery resulted in large and sustained weight reduction (10-159 kg/22-350 lb over 1-5 years) (McTigue et al., 2003). Adverse effects of bariatric surgery include wound infection, re-operation (for up to 25% of cases), vitamin deficiencies, diarrhea, hemorrhage, and death (postoperative mortality rate = 0.2%) (O'Brien et al., 2019).

Concerns over unknown *long-term* consequences of such surgical procedures also persist. The development of persistent and unfavorable surgical consequences (e.g., symptomatic cholelithiasis, band-related complications, and bowel obstruction) requiring additional surgery, and gastrointestinal issues (bleeding, infection) and nutritional deficiencies are additional long-term concerns. These metabolic and nutritional consequences require lifelong monitoring and micronutrient supplementation (Madura and DiBiase, 2012).

Over time, the reduction in surgical complications with the laparoscopic approach and other technical advancements, along with sustained improvements in weight loss and reductions in obesity-related comorbidities (e.g., diabetes, hypertension) have increased the use of bariatric surgery as a treatment option. Obesity management is best done as a multidisciplinary team approach and includes multiple evaluations (e.g., nutritional, exercise, behavioral health) prior to surgical consideration as well as post-surgical long-term care (Madura and DiBiase, 2012).

Non-surgical Bariatric Procedures.

Another option for treatment of obesity are non-surgical bariatric procedures such as the implanted gastric balloon. The balloons are placed endoscopically on an outpatient basis. The types of procedures are an option for patients who have not been successful with weight loss through nutrition and exercise, but who are not candidates for surgery. Studies

have demonstrated significantly increased weight loss with the implants vs. nutritional management and exercise alone with a good safety profile.

PRACTITIONER SCOPE AND TRAINING

Practitioners should practice only in the areas in which they are competent based on their education, training, and experience. Levels of education, experience, and proficiency may vary among individual practitioners. It is ethically and legally incumbent on a practitioner to determine where they have the knowledge and skills necessary to perform such services and whether the services are within their scope of practice.

It is best practice for the practitioner to appropriately render services to a patient only if they are trained, equally skilled, and adequately competent to deliver a service compared to others trained to perform the same procedure. If the service would be most competently delivered by another health care practitioner who has more skill and training, it would be best practice to refer the patient to the more expert practitioner.

Best practice can be defined as a clinical, scientific, or professional technique, method, or process that is typically evidence-based and consensus driven and is recognized by a majority of professionals in a particular field as more effective at delivering a particular outcome than any other practice (Joint Commission International Accreditation Standards for Hospitals, 2020).

Depending on the practitioner's scope of practice, training, and experience, a patient's condition and/or symptoms during examination or the course of treatment may indicate the need for referral to another practitioner or even emergency care. In such cases it is essential for the practitioner to refer the patient for appropriate co-management (e.g., to their primary care physician) or if immediate emergency care is warranted, to contact 911 as appropriate. See the *Managing Medical Emergencies (CPG 159 – S)* clinical practice guideline for information.

Publicly available resources for both practitioners and members can be found through the Centers for Disease Control and Prevention (CDC), United States Preventive Services Task Force (USPSTF), and the Obesity Medicine Association (OMA).

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